

CLAIMS

1. A holographic recording system, comprising:

a light beam irradiation unit for irradiating an
5 information beam and a reference beam so that an interference
pattern formed by the information beam and the reference beam
can be recorded as a diffraction grating into an information
recording region in a holographic recording medium;

a recording medium moving unit for moving the holographic
10 recording medium with respect to the optical axes of the
information beam and the reference beam; and

an optical chopper provided on the optical axes of the
information beam and the reference beam between the light beam
irradiation unit and the holographic recording medium, the
15 optical chopper moving the optical axes in a same traveling
direction as, by substantially a same traveling distance as,
and in synchronization with the information recording region,
when performing holographic recording into the information
recording region by using the information beam and the
20 reference beam.

2. The holographic recording system according to claim 1,
wherein: the optical chopper comprises a chopper lens that
travels in synchronization with and in a same direction as the
information recording region; and the chopper lens is formed
25 so as to irradiate the information beam and the reference beam

from the light beam irradiation unit to be incident on the information recording region, and to refract the information beam and the reference beam according to variations of incident positions on the chopper lens to make exit optical axes pass through an identical point, when performing the holographic recording.

3. The holographic recording system according to claim 2, wherein: the holographic recording medium has a disc shape; the optical chopper comprises a disc-shaped chopper disc having substantially a same radius as the holographic recording medium and capable of rotating in synchronization with the holographic recording medium; the chopper disc has a plurality of ring-shaped regions disposed at different positions in a radius direction; and the chopper lenses are discretely disposed in each of the ring-shaped regions in the chopper disc, with identical length and pitch in a circumference direction, and are formed so as to make the reference beam and the information beam pass through the chopper disc in a thickness direction.

4. The holographic recording system according to claim 2 or 3, wherein the chopper lens is a cylindrical lens elongated in a direction orthogonal to a traveling direction of the holographic recording medium.

5. The holographic recording system of either one of claim 3 or 4, wherein the holographic recording medium and the

chopper disc are coaxially and integrally provided so as to be freely rotated.

6. The holographic recording system of either one of claims 1 to 5, further comprising: a CCD camera for forming a reconstructed holographic image by a diffraction beam from the information recording region in the holographic recording medium, when a reconstructing beam is irradiated to the information recording region through the chopper lens; and a compensating unit for compensating position offset of the reconstructed holographic image obtained by the CCD camera, caused by movement of the chopper lens.

7. An optical chopper comprising: a chopper disc having a rotatable disc shape and comprising a plurality of ring-shaped regions disposed at different positions in a radius direction; and a plurality of chopper lenses that are discretely disposed in the ring-shaped regions in the chopper disc, with an identical length and pitch in a circumference direction, and refracts and transmits a beam incident from one surface of the chopper disc to the other surface thereof,

wherein the chopper lens is formed such that, when the chopper lens is rotated in a fixed direction at a constant speed together with the chopper disc, an exit optical axis of a laser beam incident from the one surface is refracted so as to take a fixed position in a rotational direction in a specific plane disposed on the other surface.

8. The optical chopper of claim 7, wherein the chopper lenses are each a cylindrical lens elongated in the radius direction of the chopper disc.

9. The optical chopper of claim 7 or 8, wherein the
5 chopper lenses and the chopper disc are integrally formed of a transparent resin.